

# **MODIS TECHNICAL TEAM MEETING**

**January 17, 1996**

The MODIS Technical Team Meeting was chaired by Vince Salomonson. Present were Al Fleig, Paul Chan, David Herring, Dorothy Hall, Bill Barnes, Wayne Esaias, Bob Murphy, Steve Ungar, Ed Masuoka, and Ken Anderson.

## **1.0 SCHEDULE OF EVENTS**

|                     |                                       |
|---------------------|---------------------------------------|
| <b>Jan. 15</b>      | <b>Semi-Annual Reports due</b>        |
| <b>Jan. 23</b>      | <b>MCST SAP Workshop at GSFC</b>      |
| <b>Feb. 20 - 21</b> | <b>New Millennium Workshop at JPL</b> |
| <b>May 1 - 3</b>    | <b>MODIS Science Team Meeting</b>     |
| <b>May 16 - 17</b>  | <b>MODLAND-SDST Workshop at GSFC</b>  |

## **2.0 MINUTES OF THE MEETING**

### **2.1 New Millennium Workshop**

Salomonson announced that there will be a New Millennium Workshop at JPL sometime in February (TBD). Part of the discussions, being organized by Carol Raymond, will focus on an advanced MODIS. The idea is to discuss and evaluate possible redesigns and to identify any technological "tall poles" facing MODIS and other EOS instruments. The workshop will also address the criticality of flight validation, as well as developing plans and milestones for validation. Raymond would like to have about 20 representatives present to discuss MODIS.

Salomonson said that he may not be able to attend the workshop, but will certainly try to do so. He will ask that Barnes co-chair the workshop, rather than himself, and that Murphy work with Barnes. He also stated that he would like each MODIS science discipline group to be represented at the workshop.

### **2.2 SDST Reports**

Masuoka reported that he submitted SDST's processing estimate for MODIS to ECS. He noted that the estimate for Oceans did not change. The Land Group's processing requirements are estimated to increase the total instrument requirement from the original estimate of 3.5 Gflops to 5 Gflops. Masuoka added that the new Atmosphere Group estimates put to the instrument total over 8 Gflops. However, SDST plans to study the Atmosphere numbers further.

Masuoka said that the increase in processing associated with the tiling of Level 2 data in preparation for Level 3 production could be handled by either the GSFC

or EDC DAACs, and was entered as an EDC processing load in the estimates provided to the ECS.

Fleig added that it is likely that the Ocean Group's processing requirements will increase too.

#### 2.2.1 MODIS Beta Software

Masuoka reported that SDST is now running MODIS beta software converted to 64-bit mode. He stated that he is seeing 1/3 to 2/3 in speed due to running software in native 64-bit mode.

He announced that all beta algorithms are now in, and all meet the software standards. Testing is underway.

#### 2.2.2 SWAMP Concerns

According to Masuoka, Skip Reber is putting together a working group to address the SWAMP's concerns on the interactions between the instrument teams and ECS. Reber is compiling a list of the questions that this working group will address. SDST will have representatives on the working group and other interested team members are welcome to attend.

### **2.3 MODIS Project Reports**

Anderson reported that SBRS (Santa Barbara Remote Sensing) replaced the Band 26 spectral filter and that it now meets the revised specifications agreed upon by the Science Team.

Anderson said that concern has lessened somewhat over the hybrid integrated circuits received from Sypex. SBRS now has 33 of the circuits that have survived the screening process—they need a minimum of 30 to complete the Protoflight Model (PFM).

Anderson told the Team that the PFM fold mirror failed during vibration testing before the last government furlough. The fold mirror has been repaired and retested. There is, however, some evidence of surface cracking after the retest. The cracking does not appear to be structural and the mirror appears to be ready for flight.

Additionally, the PFM aft optics were vibrated and the Shortwave/Midwave Infrared lens E2 was damaged and must be replaced, which will take about 5 weeks. Anderson noted that the 184-pin connectors are still a problem in that SBRS cannot get acceptable ones from the vendor. SBRS is developing an alternate procedure. Also, there was an along-track shift for the cooled bands following thermal and vibration testing, and that is being investigated.

These problems have caused significant cost and schedule problems over the last month and are receiving considerable attention.

Anderson announced that John Bauernschub retired. He provided support to Dick Weber, the MODIS systems manager at GSFC.

#### **2.3.1 Spacecraft Maneuvers**

Barnes announced that Jim Butler, EOS calibration scientist, has completed a draft of the spacecraft maneuvers white paper. Barnes found out that if the EOS platform does maneuvers in such a way that the MODIS radiative cooler gets hot, it will take 1 to 2 days to recover. There will be no thermal band data obtained during the recovery period. The MODIS Team is proposing maneuvers that will avoid this problem.

#### **2.4 Peer Review Update**

Murphy told the Team that the peer review planning of the MODIS proposals has been delayed due to the furlough. The reviews probably will not begin until March, so it is unlikely that we will know who the new MODIS Science Team members will be until after the Science Team Meeting in May.

### **3.0 ACTION ITEMS**

#### **3.1 Action Items Carried Forward**

1. *SDST*: distill the questions and concerns about metadata into a list and prepare a strawman for resolving the concerns.